

Appl. No. 10/517,109
Amendment and/or Response
Reply to Office action of 3 October 2006

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Amendments to the Claims:

A clean version of the entire set of pending claims, including amendments to the claims, is submitted herewith per 37 CFR 1.121(c)(3). This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method of monitoring the operation of at least one microcontroller unit (300) that is intended for at least one application and is associated with a system (100), characterized in that wherein
 - the microcontroller unit (300) has at least one non-volatile memory area (10) associated with it,
 - the memory area (10) can be read from ~~and/or~~ and written to by the microcontroller unit (300), and
 - at least one set of statistics, and in particular a set of fault statistics, relating to the operation of the microcontroller unit (300), can be kept by means of the memory area (10).
2. (Currently Amended) A method as claimed in claim 1, characterized in that wherein the memory area (10) is permanently supplied by at least one battery unit (400).
3. (Currently Amended) A method as claimed in claim 1 or 2, characterized in that wherein
 - in relation to the operation of the microcontroller unit (300) a distinction can be made between different reset events, and ~~in that~~
 - these different reset events can be made accessible to the microcontroller unit (300).

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4. (Currently Amended) A method as claimed in any of claims 1 to ~~[[3]]~~2, ~~characterized in that~~wherein the memory area ~~(10)~~
- can be read from at any time ~~and/or~~and
- can be written to only after a reset or while the system ~~(100)~~ is restarting.

5. (Currently Amended) A base chip ~~(200)~~, and particularly a system base chip, for monitoring the operation of at least one microcontroller unit ~~(300)~~ that is intended for at least one application, ~~characterized by~~including at least one non-volatile memory area ~~(10)~~ that can be read from ~~and/or~~and written to by the microcontroller unit ~~(300)~~, and by means of which at least one set of statistics, ~~and particularly at least one set of fault statistics relating to operation of the microcontroller unit~~, can be produced ~~relating to the operation of the microcontroller unit (300)~~.

6. (Currently Amended) A base chip as claimed in claim 5, ~~characterized by~~including
- at least one information unit ~~(20)~~ that is provided to allow for different reset events,
- at least one reset unit ~~(40)~~ for resetting the microcontroller unit ~~(300)~~, which reset unit ~~(40)~~ is connected ~~(42)~~ to the microcontroller unit ~~(300)~~, and
- at least one supply unit ~~(50)~~ that is connected ~~(52)~~ to the microcontroller unit ~~(300)~~.

7. (Currently Amended) A base chip as claimed in claim 6, ~~characterized in that~~wherein
- the memory area ~~(10)~~ and the supply unit ~~(50)~~ are permanently associated with at least one battery unit ~~(400)~~, and ~~in that~~
- the microcontroller unit ~~(300)~~ has at least one temporary energy supply associated with it via the supply unit ~~(50)~~.

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8. (Currently Amended) A base chip as claimed in any of claims ~~[[5]]~~ 6 to 7, characterized in that ~~wherein~~ the memory area ~~(10)~~ and/or ~~and~~ the information unit ~~(20)~~ have inserted in front of them at least one interface unit ~~(30)~~ for the exchange of data with the microcontroller unit ~~(300)~~.

9. (Currently Amended) A system ~~(100)~~, and particularly a control system, characterized by ~~including~~ at least one microcontroller unit ~~(300)~~ intended for at least one application and ~~by~~ at least one base chip ~~(200)~~ as claimed in any of claims 5 to ~~[[8]]~~ 7.

10. (Currently Amended) Use of a method as claimed in claim 1 ~~any of claims 1 to 4 and/or or~~ of at least one base chip ~~(200)~~ as claimed in any of claims 5 to ~~8~~ claim 5 for monitoring the operation of at least one microcontroller unit ~~(300)~~ intended for at least one application ~~[[,]]~~ in automobile electronics and in particular in the electronics of motor vehicles.

11. (New) The method of claim 1, wherein the fault statistics include statistics on a plurality of different types of reset events.

12. (New) The method of claim 12, further comprising:
comparing a number of at least one type of reset event to a threshold; and
when the number of the at least one type of reset event is greater than the threshold, operating the microcontroller unit in a low-energy mode.

13. (New) The base chip of claim 5, wherein the at least one non-volatile memory area comprises a random access memory.

14. (New) The base chip of claim 5, wherein the fault statistics include statistics on a plurality of different types of reset events.

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15. (New) The base chip of claim 14, wherein the base chip is further adapted to compare a number of at least one type of reset event to a threshold, and when the number of the at least one type of reset event is greater than the threshold, operating the microcontroller unit in a low-energy mode.

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